

California Energy Commission

STAFF REPORT

LOCALIZED HEALTH IMPACTS REPORT

Addendum 2 for Projects With Location Changes Awarded
Funding Through the Alternative and Renewable Fuel and
Vehicle Technology Program Under Solicitation PON-12-606
– Hydrogen Fuel Infrastructure



CALIFORNIA
ENERGY COMMISSION

Edmund G. Brown Jr., Governor

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ADDENDUM 2

The *Localized Health Impacts (LHI) Report for Selected Projects Awarded Funding Through the Alternative and Renewable Fuel and Vehicle Technology Program Under Solicitation PON-12-606-Hydrogen Fueling Infrastructure* was posted May 20, 2013 (CEC-600-2013-002)¹. This addendum applies the same approach to assess the potential localized health impacts for projects with location changes. The newly proposed station for Air Products and upgrade for Linde, LLC have comparable characteristics, equipment, and installation work. The capacity for the Air Product Station is comparable as the original proposed station. The capacity for the Linde station will be nearly double that of the original station.

Table 1 lists the original and newly proposed addresses, environmental justice² indicators, and new surroundings.

Table 1: Original and Proposed New Site Locations for Air Products and Linde, LLC With Environmental Justice Indicators and New Surroundings

Original Site Location	New Site Location	EJ Indicators for New Location	Surroundings for New Location (within 1-mile radius)
<u>Air Products</u> 25122 Marguerite Parkway Mission Viejo, CA 92692	<u>Air Products</u> 310 Encinitas Boulevard Encinitas, CA 92024	None	8 schools, 4 day care centers, and 4 medical offices/hospitals
<u>Linde, LLC</u> 390 Foster City Boulevard Foster City, CA 94404	<u>Linde, LLC</u> 1600 Jamboree Road Newport Beach, CA 92660	Age	3 schools, 2 day care centers, and no medical offices/hospitals

Source: Energy Commission staff analysis

¹ Williams, Sarah, 2013. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2013-002.

² The EJ indicators follow: (i.) minority subset represents more than 30 percent of a given city's population (2010), (ii.) city's poverty exceeds California's poverty level of 15.9 percent (2009-2013), (iii.) city's unemployment rate exceeds California's unemployment rate of 5.5 percent as of February 2016, and (iv.) city's percentage of persons younger than 5 years of age or older than 65 years of age is 20 percent higher than then California's average. For the entire state, the percentage of persons under the age of 5 years is 6.8 percent, and the percentage of persons over the age of 65 years is 11.4 percent.

Air Quality and EJ Indicators

Encinitas and Newport Beach are in nonattainment zones for ozone, particulate matter (PM³) 2.5 and PM 10. Encinitas has no EJ indicators, and Newport Beach has one (age). If a project site is in a nonattainment zone and has more than one EJ indicator, as shown in Table 2, the zone is considered a high-risk community, according to the Environmental Justice Screening Method⁴. Therefore, Encinitas and Newport Beach are not considered high-risk communities.

Table 2: EJ Indicators Compared With California
Yellow highlighted areas indicate numbers that meet the definition for EJ indicators.

	Persons Below Poverty Level (2009-2013)	Black persons (2010)	American Indian and Alaska Native (2010)	Persons of Hispanic or Latino Origin (2010)	Asian (2010)	Persons Under 5 Years of Age (2010)	Persons Over 65 Years of age (2010)	Unemployment (February 2016)
California	15.9%	6.2%	1.0%	37.6%	13.0%	6.8%	11.4%	5.5%
EJ Indicators	>15.9%	>30.0%	>30.0%	>30.0%	>30.0%	>8.16%	>13.8%	>5.5%
Encinitas	8.7%	0.6%	0.5%	13.7%	3.9%	5.4%	12.8%	3.8%
Newport Beach	7.2%	0.7%	0.3%	7.2%	7.0%	3.8%	19.0%	3.3%

Sources: Unemployment information from the State of California, Employee Development Department (EDD) Labor Market Information Division: http://www.labormarketinfo.edd.ca.gov/CES/Labor_Force_Unemployment_Data_for_Cities_and_Census_Areas.html and Demographics information from the U.S. Department of Commerce, U.S. Census Bureau: <http://www.census.gov/quickfacts/table/PST045215/0651182.0622678>

Location Analysis and Community Impacts

Based on staff's assessment of the proposed new site locations in Encinitas and Newport Beach, it is anticipated that the surrounding communities will not be disproportionately impacted by the implementation of the projects. As with the original locations, operational details are comparable. The truck delivery frequency will be similar to the original site estimates. Staff expects that air quality at and near the proposed sites will improve over time because there will be no emissions from the refueling of fuel cell electric vehicles (FCEVs), outside of the occasional truck delivery of hydrogen. It is anticipated that there will be reduced greenhouse gas emissions as a result of the FCEVs refueling at the stations. The approval and subsequent construction/upgrade of the stations will support a growing number of FCEVs.

³ "Particulate matter" is unburned fuel particles that form smoke or soot and stick to lung tissue when inhaled. The numbers stand for microns in diameter.

⁴ California Air Resources Board (ARB), *Air Pollution and Environmental Justice, Integrating Indicators of Cumulative Impact and Socio-Economic Vulnerability Into Regulatory Decision-Making*, 2010. (Sacramento, California) Contract authors: Manuel Pastor Jr., Ph.D., Rachel Morello-Frosch, Ph.D., and James Sadd, Ph.D.